CLAIM AMENDMENTS

1. (Amended) A method for estimating indicated ~~toque~~ torque in an engine using a measurement of crankshaft position, velocity, and acceleration comprising:

estimating in-cylinder combustion pressure; and

calculating indicated torque based on the estimated in-cylinder combustion pressure and engine geometry.

2. (Original) The method of claim 1 wherein estimating in-cylinder combustion pressure comprises estimating in-cylinder combustion pressure using an estimation model function.

3. (Amended) The method of claim 2 wherein said estimation model function is a first order non-linear model comprising measured values of crankshaft position, ~~speed~~velocity, and acceleration.

4. (Amended) The method of claim 3 comprising a stochastic estimation method to build cross-correlation functions between said in-cylinder pressure and measured values of crankshaft position, ~~speed~~velocity, and acceleration.

13. (Amended) A method of controlling an engine comprising:

estimating indicated ~~toque~~ torque in said engine using a measurement of crankshaft position, velocity, and acceleration; and

controlling said engine in response to said estimated indicated torque.

14. (Amended) The method of claim 13 wherein estimating indicated ~~toque~~ torque comprises estimating indicated ~~toque~~ torque using a stochastic method.

15. (Amended) The method of claim 14 wherein estimating indicated ~~toque~~ torque using a stochastic method comprises:

estimating in-cylinder combustion pressure; and

calculating indicated torque based on the estimated in-cylinder combustion pressure and engine geometry.

16. (Amended) The method of claim 13 wherein estimating indicated ~~toque~~ torque comprises estimating indicated torque using a frequency domain method.

17. (Original) The method of claim 16 wherein estimating indicated torque using a frequency domain method comprises:

performing crankshaft speed deconvolution using discrete Fourier Transfer;

determining a frequency response function for said crankshaft speed deconvolution; and

evaluating indicated torque in the frequency domain.

18. (Original) The method of claim 13 wherein estimating torque in said engine comprises using an estimation model function.

19. (Amended) A torque estimator for estimating indicated torque in an engine using a measurement of crankshaft position, velocity, and acceleration, said torque estimator adapted to estimate in-cylinder combustion pressure and calculate indicated torque based on the estimated in-cylinder combustion pressure and engine geometry.

20. (Amended) A torque estimator for estimating indicate toque in an engine using a measurement of crankshaft position, velocity, and acceleration, said torque estimator adapted to perform crankshaft speed deconvolution using discrete Fourier Transfer, determine a frequency response function for said crankshaft speed deconvolution, and evaluate indicated torque in the frequency domain.